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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,574

09/30/2003

Satoshi Tanaka

2003-1331A

1621

513

7590

12/14/2006

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EXAMINER

LUU, CUONG V

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/673,574

Applicant(s)

TANAKA ET AL.

Examiner

Cuong V. Luu

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9/11/2006 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 9-14 are pending. Claims 1-8 have been canceled. Claims 9-14 have been added.

Claims 9-14 have been examined. Claims 9-14 have been rejected.

The Examiner would like to thank the Applicant for the well-presented response, which was useful in the examination. The Examiner appreciates the effort to perform a careful analysis and make appropriate amendments to the claims.

#### ***Response to Amendment***

1. The amendments on the specification and abstract filed on 9/11/2006 have been considered and accepted.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 9-14 are rejected under 35 U.S.C. 112, second paragraph.**

2. Claims 9, 11, and 13 contain the trademark/trade name Linux. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the

goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a computer operating system and, accordingly, the identification/description is indefinite. These claims are then interpreted as controller-simulator computer and plant model-simulator computer are running on the same computer operating system.

3. Claims 10, 12, and 14 inherit the defectives of their respective independent claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants' admitted prior art, herein AAPA, in view of Santoline et al, herein Santoline, (U.S. Patent 5,826,060) and further in view of Kleyer (U.S. Pub. 2003/0033133 A1).**

4. As per claim 9, the AAPA teaches a simulation-verification apparatus, comprising:

control logic operable to:

execute the control logic (p. 1, lines 23-24; p. 2, line 1); and

output a control command signal according to an operating status of the control logic

(p. 2, lines 1-15); and

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a plant model-simulator computer, having plant model logic loaded therewith (p. 2, lines 25-27),

wherein the plant model logic is operable to:

receive the control command signal output from said controller-logic device (p. 3, lines 3-7);

simulate an action status of a plant upon the receipt of the control command signal output from said controller-simulator computer (p. 3, lines 3-7); and

output a run status signal which represents the action status (p. 3, lines 3-7); and

wherein said plant model-simulator computer is operable to execute the plant model logic.

However, the AAPA does not teach a controller-simulator computer, having control logic loaded.

Santoline teaches this limitation (col. 2, lines 40-45).

The AAPA and Santoline do not teach the controller-simulator computer and plant model-simulator computer running on the same computer operating system.

Kleyer teaches this feature (p. 2, paragraphs 0015-0017 and 0026. In these paragraphs Kleyer teaches automation engineering process model controlling the power plant model running on the same computer with the power plant model computer. This indicates that the control software running on the same operating system with the power plant model.)

It would have been obvious to one of ordinary skill in the art to combine the teachings of the applicants' admitted prior art, Santoline, and Keyler. The teachings of Santoline and Keyler would have resolved the issue of being difficult to emulate the real time response of a distributed process control system (Santoline, lines 54-59) and required no specific

computers necessary in order to operate the various aforementioned software programs of the simulation of the simulation computers (Keyler, p. 2 paragraph 0026).

5. As per claim 10, the AAPA teaches the simulation-verification apparatus according to claim 9, wherein the control logic is a program operable to exercise run control of a combined cycle power plant, and wherein the plant model logic is a program operable to simulate a running action of the combined cycle power plant (p. 1, lines 23-24; p. 2, lines 1-13).
6. As per claim 11, the AAPA teaches a simulation-verification apparatus, comprising:
  - control logic and a computation cycle managing task loaded therewith,
    - wherein the control logic operates according to a computation cycle, in which the computation cycle must be set (p. 1, lines 23-24; p. 2, line 1-15. The descriptions of control logic issuing commands to run a combined cycle power plant inherit this limitation),
    - wherein the computation cycle managing task is operable to set the computation cycle of the control logic (p. 1, lines 23-24; p. 2, line 1-15. The descriptions of control logic issuing commands to run a combined cycle power plant inherit this limitation),
    - output a control command signal according to an operating status of the control logic (p. 2, lines 1-15); and
  - a plant model-simulator computer, having plant model logic and a computation cycle managing task loaded (p. 2, lines 25-27) therewith,
    - wherein the plant model logic is operates according to a computation cycle, in which the computation cycle must be set (p. 3, lines 3-7),
    - wherein the plant model logic is operable to:

receive the control command signal output from said controller-logic device (p. 3, lines 3-7);

simulate an action status of a plant upon the receipt of the control command signal output from said controller-logic device (p. 3, lines 3-7); and

output a run status signal which represents the action status, wherein the computation cycle managing task is operable to set the computation cycle of the plant model logic (p. 3, lines 3-7), and

However, the AAPA does not teach a controller-simulator computer, having control logic loaded.

Santoline teaches this limitation (col. 2, lines 40-45).

The AAPA and Santoline do not teach the controller-simulator computer and plant model-simulator computer running on the same computer operating system.

Kleyer teaches this feature (p. 2, paragraphs 0015-0017 and 0026. In these paragraphs Kleyer teaches automation engineering process model controlling the power plant model running on the same computer with the power plant model computer. This indicates that the control software running on the same operating system with the power plant model.)

It would have been obvious to one of ordinary skill in the art to combine the teachings of the applicants' admitted prior art, Santoline, and Keyler. The teachings of Santoline and Keyler would have resolved the issue of being difficult to emulate the real time response of a distributed process control system (Santoline, lines 54-59) and required no specific computers necessary in order to operate the various aforementioned software programs of the simulation of the simulation computers (Keyler, p. 2 paragraph 0026).

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7. As per claim 12, these limitations have already been discussed in claim 10. They are, therefore, rejected for the same reasons.

8. As per claim 13, the AAPA teaches a simulation-verification apparatus, comprising:

control logic and a computation cycle managing task loaded therewith,

wherein the control logic operates according to a computation cycle status (p. 1, lines 23-24; p. 2, line 1-15. The descriptions of control logic issuing commands to run a combined cycle power plant inherit this limitation)

wherein the computation cycle managing task operable to set the computation cycle of the control logic (p. 1, lines 23-24; p. 2, line 1-15. The descriptions of control logic issuing commands to run a combined cycle power plant inherit this limitation), and wherein said controller-simulator computer is operable to:

store the computation status of the control logic in a storage part (the computation of cycle managing task for issue command and status discussed above inherits the storing of the computation status of the control logic before sending out to the plant model simulator computer);

execute the control logic, according to either the computation cycle set by the computation cycle managing task or the computation status stored in the storage part of said controller-simulator device (p. 1, lines 23-24; p. 2, line 1-15); and

output a control command signal according to an operating status of the control logic (p. 2, lines 1-15); and

a plant model-simulator computer, having plant model logic and a computation cycle managing task loaded (p. 2, lines 25-27) therewith,

wherein the plant model logic operates according to a computation cycle (p. 3, lines 3-7),



wherein the plant model logic is operable to:

receive the control command signal output from controller-logic device (p. 3, lines 3-7);

simulate an action status of a plant upon the receipt of the control command signal output from said controller-logic device (p. 3, lines 3-7); and

output a run status signal which represents the action status, wherein the computation cycle managing task operable to set the computation cycle of the plant model logic (p. 3, lines 3-7), and

wherein said plant model-simulator is operable to:

store the computation status of the plant model logic in a storage part of said plant model-simulator computer (p. 2, lines 1-9. The storing of the computation status of the plant model logic in a storage part of said plant model-simulator computer has to be done for sending to the control logic device as described in these lines); and

However, the AAPA does not teach a controller-simulator computer, having control logic loaded.

Santoline teaches this limitation (col. 2, lines 40-45).

The AAPA and Santoline do not teach the controller-simulator computer and plant model-simulator computer running on the same computer operating system.

Kleyer teaches this feature (p. 2, paragraphs 0015-0017 and 0026. In these paragraphs Kleyer teaches automation engineering process model controlling the power plant model running on the same computer with the power plant model computer. This indicates that the control software running on the same operating system with the power plant model.)

It would have been obvious to one of ordinary skill in the art to combine the teachings of the applicants' admitted prior art, Santoline, and Keyler. The teachings of Santoline and

Keyler would have resolved the issue of being difficult to emulate the real time response of a distributed process control system (Santoline, lines 54-59) and required no specific computers necessary in order to operate the various aforementioned software programs of the simulation of the simulation computers (Keyler, p. 2 paragraph 0026).


9. As per claim 14, these limitations have already been discussed in claim 10. They are, therefore, rejected for the same reasons.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong V. Luu whose telephone number is 571-272-8572. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

  
**KAMINI SHAH**  
**SUPERVISORY PATENT EXAMINER**

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah, can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. An inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CVL

  
KAMINI SHAH  
SUPERVISORY PATENT EXAMINER